Origin of oil.

Bezverkhniy Volodymyr Dmytrovych.

Ukraine, e-mail: bezvold@ukr.net

Considering the iodine content in oil, it can be argued that oil has a biological origin.

If the oil is of biogenic origin, it will contain iodine, since iodine is widespread in living organisms, especially marine organisms such as algae, zooplankton, etc. contain a lot of iodine (organic molecules). Plants contain iodine from trace amounts to 2.5 mg per kilogram of dry matter, plants near the sea contain a lot of iodine, and seaweed (kelp) contains about 3 mg of iodine per kilogram of dry matter (0.3 * 10^(-3) %).

That is, if the oil is of biogenic origin and was formed from the remains of zooplankton and algae in water-sedimentary deposits on the bottom of ancient warm seas, then it will contain iodine, and in approximately the corresponding quantities (since it was formed from algae, zooplankton, etc.).

Conversely, if oil is of abiogenic origin and formed in mantle foci at extremely great depths from inorganic carbon and hydrogen at high temperatures and pressures, then the concentration of iodine in oil will be lower. Since the iodine content in the Earth's crust is lower (0.5 mg per kilogram) and under these conditions, reduction reactions will occur, that is, the removal of iodine from organic molecules (hydrogen, as well as the formed hydrogen iodide, are strong reducing agents).

Iodine in real oil contains from 10^(-3) to 10^(-4) %, which corresponds to the iodine content in organisms, plants, algae, etc., which means that oil is of biogenic origin. Iodine in the Earth's crust contains 0.5 * 10^(-4) %, but taking into account the reduction reactions, the iodine content in abiogenic oil would be lower, which is not actually observed.